

24

FOOD SAFETY INITIATIVE STRATEGIC PLAN

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These efforts to establish long range strategic planning for food safety are extremely important. The separate agencies do need to cooperate more on specific projects.

When you also asked "What should be the short-term goals and critical steps to realize this vision?" you not only did recognize the need to concentrate on steps to be taken years in the future, but also you focused on what can be accomplished now.

The single most critical, urgent, and important short-term goal is the reduction of bacterial contamination on meat products in processing plants. All poultry and pork have a high normal load of resident and transient microorganisms on the skin, while contamination of beef occurs when the bung and hide are removed. The contamination not only includes dangerous pathogens but organisms that are resistant to multiple antibiotics. The heart of the problem therefore, lies not only in inspection and protection from contamination but in the main involves sanitization of what starts out as a naturally contaminated product. New technologies have now become available for carcass sanitization to unprecedented low levels of bacterial loads on poultry. The new process will be equivalent to results from radiation treatment without its lack of consumer acceptance. Use of these new safe and effective biocides will yield important food safety improvements in the shortest period of time.

The critical next-step for the Presidents Council on Food Safety is to examine the industrial applications of these new biocides and their impact on food safety. It is a matter that is too important and urgent to be left at the lowest level of the government agencies. They could be successful in the long run but it would, of necessity, be handled in a long procession of research applications, review committees and their advisors. Final approval of research or regulatory support must then be made at several successively higher levels within the agencies. All this takes time. Each stage of such research needs six to eight months of office procedure plus an additional week or so of actual laboratory work. These are all necessary general procedures for a government, but they are not an efficient and expeditious way to get an urgent job done. After an examination, the Presidents Council or a competent subcommittee might be able to assign priorities and streamline review procedures in order to speed application of the new biocides to specific industry production lines. The preliminary and final hazard analysis identified a potential public health benefit of 7.13 to 26.59 billion dollars by elimination of the four main pathogens. A 50 % reduction would result in a 3.6 to 13.3 billion dollar benefit.

Also, there is a need for a comprehensive short-term review of the hazards of the currently used biocides. For instance, the European Union has banned use of the chlorine compounds on all meat products because of their well known ability to produce carcinogens and instead they use the tri sodium phosphates. In the United States, we use the chlorine compounds widely for routine carcass sanitation and use the phosphates as back up sanitation for carcasses removed from the processing lines. Some States are now attempting to ban the use of phosphates because they contaminate the rivers and produce algae blooms. The new biocides neither produce carcinogens or pollute rivers.

The Agricultural Departments Symposium on Food Safety in Washington on July 28, 1998 provided an opportunity for reporting preliminary findings for the new biocides.

Surprisingly, the study showed complete eradication of pathogens on chicken carcasses removed from an actual chicken processing plant line. (See attached data)

These effective reductions in bacterial loads have now been confirmed independently at the Agricultural Departments Research Laboratory at Clay Center, Nebraska. In preliminary low dose studies on beef contaminated with specific pathogens, 3.7 log reductions were achieved. The results for *listeria* were unprecedented in that laboratory. Higher dosage ranging studies are underway in their pilot plant facilities. One of the most interesting results of this Clay Center study was that the new biocides were still suppressing bacterial counts seven days after treatment holding out hope for effective protection from subsequent contamination and spoilage of meat products in transit.

It has long been reported that bacteria resistant to multiple antibiotics are common in cattle as a result of antibiotic usage in agriculture. It has been shown through identities of antibiotic resistance combinations, carrier plasmids, serotypes and biochemical types that these bacteria have been identified in serious human Salmonella infection outbreaks thousands of miles from the infected herds. This transmission is most likely associated with shipment of meat products. The use of antibiotics in agriculture is of huge economic importance. Use of safe biocides with such potent reductions bacterial counts in the processing plants hold out the prospect of breaking this route of transmission to human populations without interfering with the use of antibiotics in agriculture.

Tyson Foods, Inc.
Corporate Quality Assurance Laboratory
Microbiological Worksheet



Date Received : March 10, 1998

Location : Q A / Helen Brown

Log #	Sample Description	Total Plate Count	Coliforms	E. coli
5545	A-1	0	0	0
5546	A-2	0	0	0
5547	A-3	740 ✓	0	0
5548	A-4	1	0	0
5549	A-5	0	0	0
5550	A-6	0	0	0
5551	B-1	3	0	0
5552	B-2	0	0	0
5553	B-3	0	0	0
5554	B-4	0	0	0
5555	B-5	0	0	0
5556	B-6	260 ✓	0	0
5557	C-1	0	0	0
5558	C-2	0	0	0
5559	C-3	0	0	0
5560	C-4	0	0	0
5561	C-5	0	0	0
5562	C-6	0	0	0
5563	D-1	100	2	2
5564	D-2	12,600	720	710
5565	D-3	150	3	2
5566	D-4	830	25	22
5567	D-5	410	6	6
5568	D-6	790	3	2
5569	D-7	290	3	2

R₁

R₂

R₃

CONTROL

ALL ZERO

ALL ZERO

Ave. 866,857 43,542 42,628

Units = CFU per gram

CFU = Colony Forming Units, N.D. = None Detected

Date report generated : March 23, 1998

Results to : Helen Brown and Dr. Guthery

Lab Specialist : Rebecca S. [Signature]

Dr. GUTHERY